LONG-TERM CARE SERVICE UTILIZATION AMONG LOW-INCOME OLDER ADULTS

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The goals of this study are (1) to provide information about the Medicaid home-care option for elderly persons who need financial support from Medicaid, and (2) to identify the similarities and differences in service utilization patterns between those Medicaid clients in a home-care program and those in a nursing home.

Framework of the Study

In the planning process for this study, two major tasks were identified: (1) specifying target population; (2) identifying major service areas.

In the first task, the needs of home-care services for the elderly were studied. Also, to further identify the home-care population, three major risk factors affecting elderly people were discussed -- the aging factor, the growing demand in health care services due to chronic limitations, and poverty among older adults.

In the second task, the focus was on comparing the Medicaid waiver program with nursing home-care in terms of service utilization patterns. A question was asked: Do home-care clients use less institutionalized care after joining PASSPORT than before joining the program? Two major institutionalized services were included in the analysis: physician services and hospitalization.

First Task: Specifying Target Population

Since the National Health Planning and Resources Development Act (P.L. 93-641) was signed into law in 1975, long-term care planning for elderly persons has become a major concern for many older persons, for most families with multi-generations, for various service organizations, and for public agencies at all levels.

Long-term care involves not only public agencies at the federal, state, and local levels, but also private for-profit and non-profit organizations. It includes all the services that address health care, personal assistance, and

social needs of individuals who lack some capacity for self care (CCF, 1984; Harrington et al., 1985; Kane & Kane, 1982). In other words, long-term care is not limited to medical care. The existence of long-term care does not simply reflect the presence of a chronic disease. Rather, limitations in physical and/or mental capacity are the most common reasons for needing long-term care. In essence, long-term care (LTC) is defined as "services that are needed on a continuing basis to enable a person with a chronic disability to have full physical, social, and psychological functioning" (CCF, 1984:40).

Why "Care for Older People"?

Long-term care is for people of all ages who are unable to care for themselves due to chronic illness or disabilities. However, the discussion of long-term care usually focuses on older people. There are two major reasons for this focus. First, older people (especially those age 65 and over) are more likely than the general population to have long-term care needs (FCA, 1978). The likelihood of activity limitation rises dramatically with age; elderly people are four-and-a-half times more likely than those under age 65 to suffer from activity limitation (CCF, 1984). Also, people with chronic limitations need assistance with everyday living in order to maintain their quality of living.

Secondly, the elderly population is increasing tremendously. According to the Congressional Clearinghouse on the Future (CCF, 1984), "(r)egardless of birth and immigration rates, there are going to be more elderly people in our country in the future" (p. vii). In 1980, the 65-plus population numbered 25.5 million which was 11.3% of the entire population. By the year 2050, it is projected that 67.4 million (21.8% of the entire population) will be 65 and older. In other words, one out of five Americans will be 65-plus by 2050 (CCF, 1984; USB Census, 1980; USS, 1986). In terms of life expectancy, it is projected that the 65-plus population in 1980 will have an average of 18 years of life remaining for females and 14 years for males (CCF, 1984). Because of this population trend, the long-term care needs of the elderly will most likely grow.

Why "Care for Low-income Elderly"?

Besides being aged and having poor health, unfortunately, many older people are "victims" of poverty. When the Health Interview Survey discusses the perceptions

of older people about their health, it also points out that their perceptions are positively related to income (U.S. Senate, 1986). Poverty is one of the major obstacles for older people who want to be independent. However, the fact is that older people have substantially less income and tend to be poorer than those under 65 years of age. In this competitive society, a lack of financial support becomes a major problem for many older people, especially those who need medical care.

In 1984, per capita spending for health care for older people was $4,202. While federal spending on the elderly population is expected to increase, recent budget bills have put pressure on cutting services. Even with Medicare or Medicaid assistance, elderly individuals spend an average of $1,526 out of their own pockets, which is about 15% of their total income for health care services (USS, 1986).

Combining all the risk factors, those people aged 65 and over, having low incomes, and suffering from chronic limitations are the major subgroups in need of long-term care. These people need personal assistance on a continuing basis. They also need support from society because they tend to be too frail to allocate resources and too poor to pay for services. Therefore, the recognition of the need for long-term care as well as a sense of urgency about these risk factors are building up within the societal network.

Nursing Homes and Medicaid

One of the current characteristics of long-term care is that it is institutionally based and medically oriented. Public financial support outside nursing homes is so scarce that older people with chronic limitations from low-income or even median-income families may not be able to afford long-term care delivered to their own homes. As a result, some elderly persons are placed in nursing homes to receive "Medicaid-paid" care as a last resort. The outcome of this financial dilemma is that "many elderly people in nursing homes are receiving a higher level of care than their condition requires -- between 10 and 45 percent depending on the type of nursing facility" (CCF, 1984, p.43). In other words, government long-term care support is biased toward institutionalization, while non-institutional options are not adequate in the federally-funded long-term care system.

PASSPORT: A Home-Care Option

In order to counter the institutional bias of federal long-term care programs and to provide more options in long-term care, "Congress enacted new authority for the Department of Human Services (DHHS) to waive certain Medicaid requirements to broaden coverage for a range of community-based services and to receive Federal reimbursement for these services" (USS, 1986: 246). This Medicaid home-care enactment is stated in Section 2176 of the Omnibus Budget Reconciliation Act of 1981 (P.L. 97-35) and is known as the "2176 Waiver."

By early 1983, 45 state programs from 35 states had implemented their 2176 Waiver programs (Tames, 1984). In Ohio, PASSPORT is the only 2176 Waiver program which is designed to demonstrate the effectiveness of the home-care option of Medicaid. The major goals of PASSPORT are:

1. Prevention of inappropriate placements of clients seeking long-term care services, and the development of an effective community-based nursing home pre-admission screening program to provide home-care service information to potential nursing home clients.

2. Expansion of Medicaid covered services to include a broader range of community-based long-term care.

3. Development of a coordinated network of community-based long-term care services.

Second Task: Identifying Major Service Areas

Since age, health, and poverty are the major factors that threaten older people's ability to master their own tasks independently, the focus of this study is on identifying the availability of Medicaid service options to help maximize an individual's unique potentials and maintain his or her autonomy and dignity.

Complementary to the nursing home system is a home-care option. The intent of the 2176 Waiver is not to eliminate services for those who can be cared for at home, but it is built upon the idea that both formal and informal care can constitute a social support network for chronically-ilmited individuals. Within this network, services are provided by experienced and trained workers and professionals, with the assistance of the family.

Besides home health care services, institutional health care services are also available for home-care clients of the 2176 Waiver program, when needed. Health services include hospital usage and physician visits. On the average, older people are the heaviest users of health services. According to a 1984 report on health change, "persons 65-plus visit a physician six times for every five visits by the general population. They are hospitalized approximately twice as often as the young population, stay twice as long, and use twice as many prescription drugs" (USS, 1986, pp. 74-5). In light of these facts, a home-care option should aim at preventing unnecessary institutionalized services to assist the elderly, but not at eliminating the necessary ones to cut costs. In order to examine the medical care functions of the Medicaid home-care option, service utilization patterns should be examined.

Research Design

A pretest-posttest design was used to compare the service utilization patterns between two groups -- home-care group and nursing home group. The home-care group consisted of all individuals who were 65 plus, needed ICF (Intermediate Care Facility) level of care, and enrolled in the PASSPORT home-care program during its first year of implementation. The nursing home group was a random sample of individuals who were 65 or older, assessed for ICF level of care, and entered nursing home after assessed by PASSPORT teams during the same period of time. All 103 home-care clients and 136 nursing home clients (12.5% of the nursing home clients) formed the target population of this study.

With reference to the monitoring purpose of the PASSPORT assessment, all clients were re-assessed in every six-month period after the initial assessment for their Medicaid applications. Therefore, a pretest-posttest design was applied to compare service utilization in different time periods, with each time period consisting of six consecutive months.

Hypotheses

Two hypotheses were tested. The first was that the home-care clients would utilize fewer physician services than the nursing home clients. The second was that the home-care clients would utilize fewer hospital services than the nursing home clients. Data on service utilization were collected from the Medicaid Claims History listing.

Method

Baseline measures were conducted to make sure both groups were homogeneous in terms of physical functioning, basic demographic characteristics, and health status. No significant differences were found between the groups, except for race and initial place of assessment. Differences were controlled statistically by using the analysis of covariance (ANCOVA).

This study included three types of analysis. The first analysis compared the overall utilization of Medicaid services. The second analysis compared the utilization of physician services in terms of days and Medicaid cost between the two groups. The third analysis focused on the utilization of hospital services.

Findings

Overall Service Utilization. Generally speaking, the pre-test service utilization patterns between the home-care and the nursing home groups were very similar. Overall, about two-thirds of the subjects used prescribed drugs; more than half used physician services; and over one-fourth used ambulance services (See Table 1). However, there were two notable differences -- (a) more home-care clients used hospital and outpatient services than nursing home clients; and (b) more nursing home clients used nursing home facilities than did home-care clients. Of course, the second difference was expected.

In terms of the post-test service utilization patterns, prescribed drugs were again used frequently by over 90 percent of all clients. The next most common services were physician services (83%), and ambulance services (62%). Apparently, more home-care clients used health care services -- outpatient, inpatient, physician, and home health services -- than the nursing home clients, while most of the nursing home clients relied on nursing home facilities (95.6%). Also, more home-care clients (63.2%) than nursing home clients (23.5%) ordered supplies of medical equipment. The nursing home clients also used more services from independent laboratories (46.3%) and podiatrists (37.5%) than did the home-care clients (30.1% and 15.5%, respectively). Table 1 also summarizes these results.

Table 1
Medicaid Service Utilization By Group

Medicaid Services	Pre-test HC %	Pre-test NH %	Post-test HC %	Post-test NH %
Prescribed Drugs	65	60	94	88
Physician Services	61	58	86	81
Inpatient Hospital	37	21	33	31
Outpatient Hospital	35	18	46	31
Medical Equipment	35	12	63	24
Ambulance Services	29	31	67	59
Intermediate Care Fac.	18	54	38	95
Independent Lab.	18	27	30	46
Home Health Services	15	2	22	0
Optometry Services	6	3	3	7
Podiatrists	6	19	16	38
Dental Services	5	3	3	7
Eyeglasses	4	5	6	9
Clinic	3	2	2	2
Psychological Services	1	0	0	1

Physician Service Utilization. In order to test the before-after effect of PASSPORT, a comparison was conducted on the utilization of physician services among all the home-care clients. Table 2 summarizes the results of pre- and post-test mean differences in terms of physician days and physician service costs of the home-care group. On the whole, the home-care clients tended to use fewer physician services in terms of days but their physician costs tended to be no different from the pre-test period.

Comparing the differences of physician service utilization between the two groups, an ANCOVA was conducted by assessment time periods. After controlling for the covariates, the main effect was not significant. The results indicated that the home-care clients did not significantly differ from the nursing home clients in terms of time spent on physician care ($F=1.29$ at 6-month re-assessment; $F=1.74$ at 12-month re-assessment) and in terms of physician service cost ($F=.48$ at 6-month re-assessment; $F=.60$ at 12-month re-assessment).

Table 2
Paired T-Test for Physician Service Utilization
Within the Home-Care Group

Physician Services	Time Period	Mean (X)	S.D.	Mean difference	T-Value	N
Days	Initial	29.14	39.59			
				- 6.92	-1.30	76
	6-mo.	22.22	35.49			
	Initial	21.67	32.32			
				-13.93	-2.37*	42
	12-mo.	7.74	19.59			
	Initial	18.72	25.10			
				-15.78	-2.49*	18
	18-mo.	2.94	6.19			
Cost	Initial	9.58	13.41			
				5.15	.71	76
	6-mo.	14.73	61.76			
	Initial	9.17	12.60			
				2.99	.86	42
	12-mo.	12.16	19.77			
	Initial	6.77	8.36			
				-2.54	-.95*	18
	18-mo.	4.24	6.59			

* $p<.05$
Initial=Initial Assessment
6-mo. =6-month Re-assessment
12-mo. =12-month Re-assessment
18-mo. =18-month Re-assessment

Hospitalization. In order to test whether the PASSPORT home-care program helped reduce institutionalized health care for the home-care clients, a within-group study was completed to compare hospitalization patterns (days and cost) before and after the home-care clients enrolled in PASSPORT. The results (Table 3) showed that there was a significant difference in terms of hospital days between initial assessment and the 6-month re-assessment ($t=-3.19$, $df=75$, $p<.01$) and between initial assessment and the 12-month re-assessment ($t=-3.02$, $df=41$, $p<.01$). Although the home-care clients seemed to use fewer hospital days in the 18-month re-assessment period, the result was not significant.

In terms of cost, the home-care clients seemed to spend more during the first two periods; however, they spent less in the third period. Nevertheless, no significance was found.

Table 3
Paired T-Test for Hospital Services Utilization Within the Home-Care Group

Hospital Services	Time Period	Mean (X)	S.D.	Mean difference	T-Value	N
Days	Initial	12.17	25.06			
				- 9.18	-3.18*	76
	6-mo.	2.99	5.42			
	Initial	7.45	13.37			
				- 6.55	-3.02**	42
	12-mo.	0.90	2.79			
	Initial	2.67	5.67			
				- 1.89	-1.24	18
	18-mo.	2.94	2.37			
Cost	Initial	35.38	70.40			
				1.62	.13	76
	6-mo.	37.00	100.83			
	Initial	22.69	49.59			
				3.44	.15	42
	12-mo.	26.12	135.70			
	Initial	10.93	25.14			
				-3.45	-.41	18
	18-mo.	7.48	22.20			

**p<.01
Initial=Initial Assessment
6-mo. =6-month Re-assessment
12-mo. =12-month Re-assessment
18-mo. =18-month Re-assessment

An ANCOVA test was also conducted to compare group differences in terms of days and cost of hospitalization. No significant difference was found in terms of time (days) spent in a hospital. However, there was a significant difference in terms of Medicaid spending on hospital care. Follow-up studies indicated that the home-care clients tended to spend more during the 6-month re-assessment period ($41.56 more) and less during the 12-month re-assessment period ($18.19 less).

Discussion

Overall Medicaid services, physician services, and hospitalization constituted the major focus of the analysis of service utilization. First of all, the results of the overall Medicaid service utilization identified prescribed drugs, physician services, ambulance services, and hospital services (outpatient and inpatient) as commonly used by most clients in both groups. Whether a client receives long-term care at home or in a nursing home does not hinder his or her medical health care needs. The only difference is that due to the nature of the programs (home-care versus nursing home-care), the home-care clients used more home health services, while the nursing home clients used more nursing home facilities.

Secondly, the results of physician service utilization seemed to support the hypothesis that the home-care clients received less physician care (in terms of days) after entering the program. However, these clients used about the same amount of Medicaid on physician services. Combining these two findings, it was found that the home-care option did not alter the physician service utilization patterns of the home-care clients. Furthermore, compared with the nursing home clients, the home-care clients did not show any significant differences in terms of time or money spent on physician services. In other words, using the nursing home clients as a control, results showed that the home-care option did not eliminate necessary physician care among the home-care clients.

Thirdly, the results of hospital service utilization supported the hypothesis that the home-care clients used fewer hospital services than did the nursing home clients. Combining the results of "time" and "spending," the home-care clients tended to spend about the same amount of time at both six-month and twelve-month periods, spend more money during the six-month re-assessment, but spend less during the twelve-month period than did the nursing home clients. These findings supported the fact that the clients from both groups needed regular hospital care because of their chronic conditions. However, the utilization rate of the home-care clients tended to diminish over time because of the supplement of regular home health care and physician visits.

Implications

In social work practice, a comprehensive and coordinated network is essential for effective service delivery. For this network approach to work, sufficient information about the needs and the characteristics of older people is required. In terms of needs, the results of this study supported the fact that home-care or nursing home-care are two of the long-term care options available to meet clients' health care needs. A home-care client receives similar amounts of health care to that of a nursing home client if both of them require similar levels of care. In terms of characteristics, the availability of an informal care system for older people is an indicator of the need for home-care. If informal care is available, the long-term care system should encourage family participation in the caring process by providing adequate home health services through Medicaid.

Nevertheless, this study collected only short-term data on the first eighteen-month implementation. This time design was only appropriate in assessing the short-term effect of home-care. In the first follow up, five subjects died just one month after the initial assessment. During this six-month period, ten subjects entered a nursing home. These findings were aimed at testing one of the PASSPORT functions of delaying or preventing premature institutionalization. However, they implied that PASSPORT was likely to be a stepping-stone to nursing homes for some people. For other people who were already in nursing homes but wanted to consider home-care, this "short-term" function might interfere with the decision of choosing home-care. In order to provide adequate information about long-term care options for older persons, further studies of the long-term effects are recommended.

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